UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

DIVE PLAN

From: **Rob Pedersen, Divemaster**

Date of Original Request: May 11, 2012
Dive Date: June 5, 6, 7, 2012

Approval

Thru: **Sean Sheldrake, UDO**

To: **Mark Filippini, Unit Manager, OEA**

Joyce Kelly, Director, OEA

Project: **Quartermaster Harbor: WDNR Support for Maury Island Aquatic Reserve impact assessment.**

Location: **Quartermaster Harbor (Burton and Dockton area), Vashon/Maury Island.**

***JUSTIFICATION FOR HAZARDOUS DUTY**
This dive plan conforms to the elements in EPA Order 3100.3A and meets the requirements specified in 5 CFR 550, Subpart I, Appendix A, Underwater Duty and/or Exposure to Hazardous Agents as noted directly below. A hazard pay differential of 25% is warranted. A general "Request for Approval of a Hazard Pay Differential" form is on file with UDO, Deputy UDOs, & RHSO

APPLICABLE EXPECTED HAZARDOUS CONDITIONS *(check all that apply)*
(X) Underwater duty: Diving required in scientific and engineering pursuits, when:
- (X) at a depth of 20 feet or more below the surface; or
- (X) visibility is restricted; or
- (X) in rapidly flowing or cold water; or
- ( ) vertical access to the surface is restricted by ice, rock, or other structure (e.g. entanglements); or
- ( ) testing or working with hardware which presents special hazards (e.g., high voltage equipment or underwater mockup components in an underwater space simulation study). **EXPLAIN**: **_____**.

Exposure to Hazardous Agents, work with or in proximity to:
- ( ) Toxic chemical materials. Toxic chemical materials when there is a possibility of leakage or spillage.
- ( ) Virulent biologicals. Materials of micro-organic nature which when introduced into the body are likely to cause serious disease or fatality and for which protective devices do not afford complete protection.

Authorized to take GOV to residence overnight, immediately prior to and/or after dive operations; GOV is not for personal use. This will allow for earlier departure to the dive site and later return, as well as SCUBA tank fills which must be conducted during and after dive operations. Yes_X__ No____

OBJECTIVES AND LOGISTICS

Background: The Washington State Department of Natural Resources, Aquatic Resources Division has requested EPA dive team support. As manager and trustee for state-owned aquatic lands WDNR has designated Quartermaster Harbor, King County as part of an aquatic reserve around Maury Island. They are currently developing a recreational mooring buoy plan for Quartermaster Harbor in response to an increase of unauthorized buoys in recent years.

The dive team will assist WDNR in documenting the sea floor in two areas – Dockton and Burton Cove. They are concerned about anecdotal reports of car batteries, sunken vessels, broken creosote pilings, and similar debris in the vicinity of existing, unauthorized mooring buoys. WDNR has also evaluated 30 years' worth of Department of Fish and Wildlife herring spawn surveys that illustrate a substantial decline in eelgrass and other aquatic vegetation.

Figure 1: Burton Cove (shows calculated buoy swings). The cluster of buoys off the lower marina and north of the reserve boundary line are the primary targets.

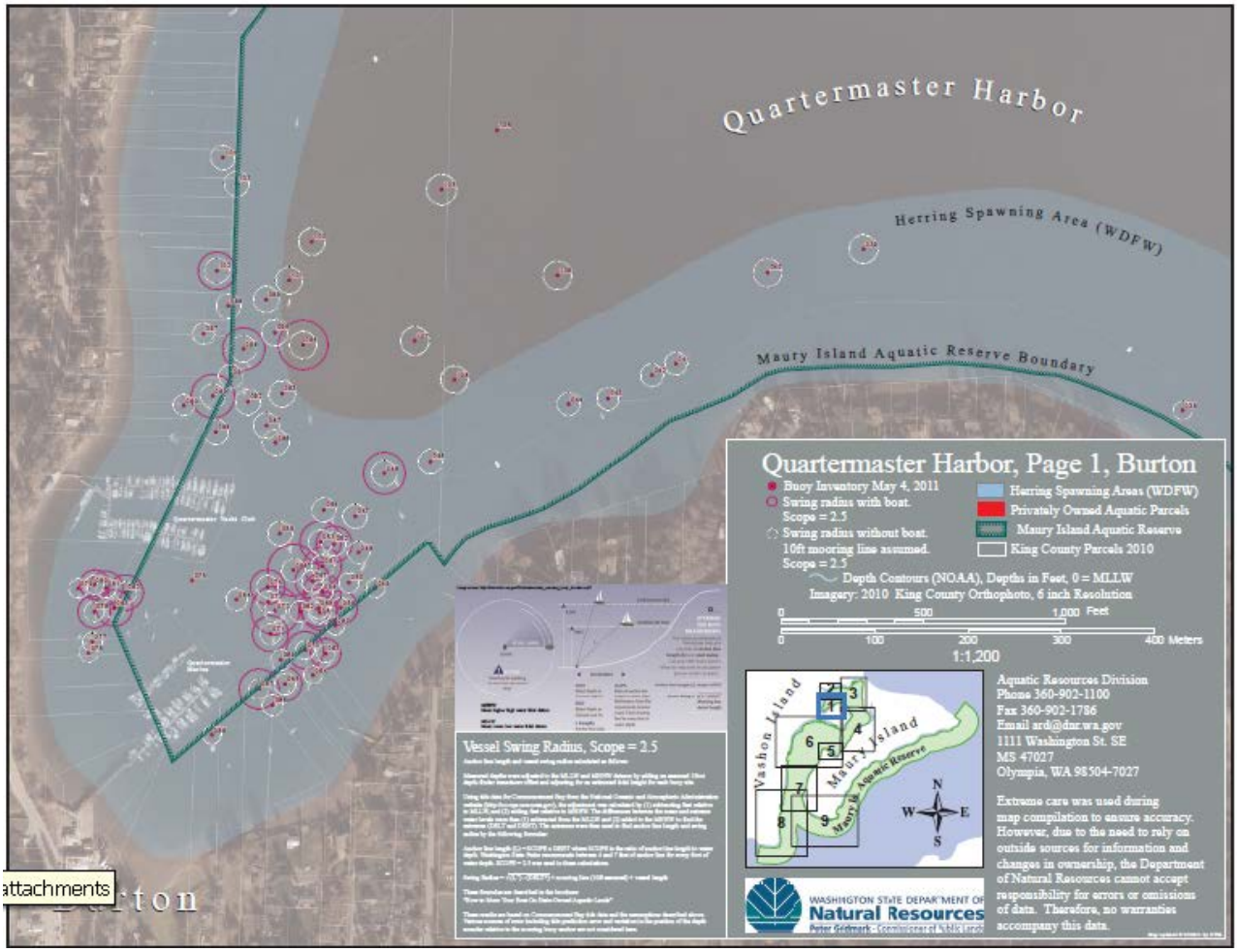


Figure 2. Dockton Area (shows calculated buoy swings). Secondary survey area for divers; ROV will be employed to document the two sunken vessels, buoy anchors and bottom condition.

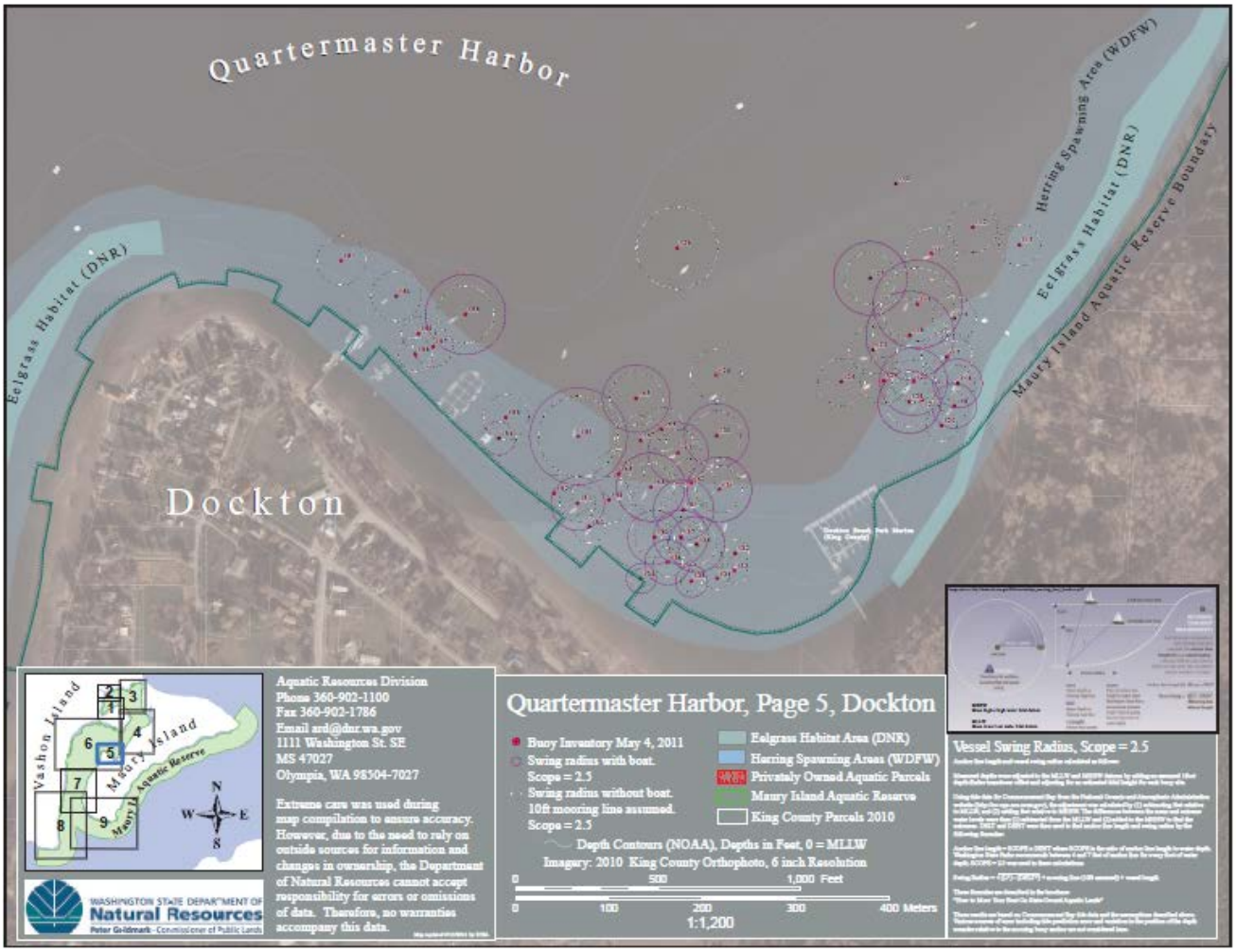
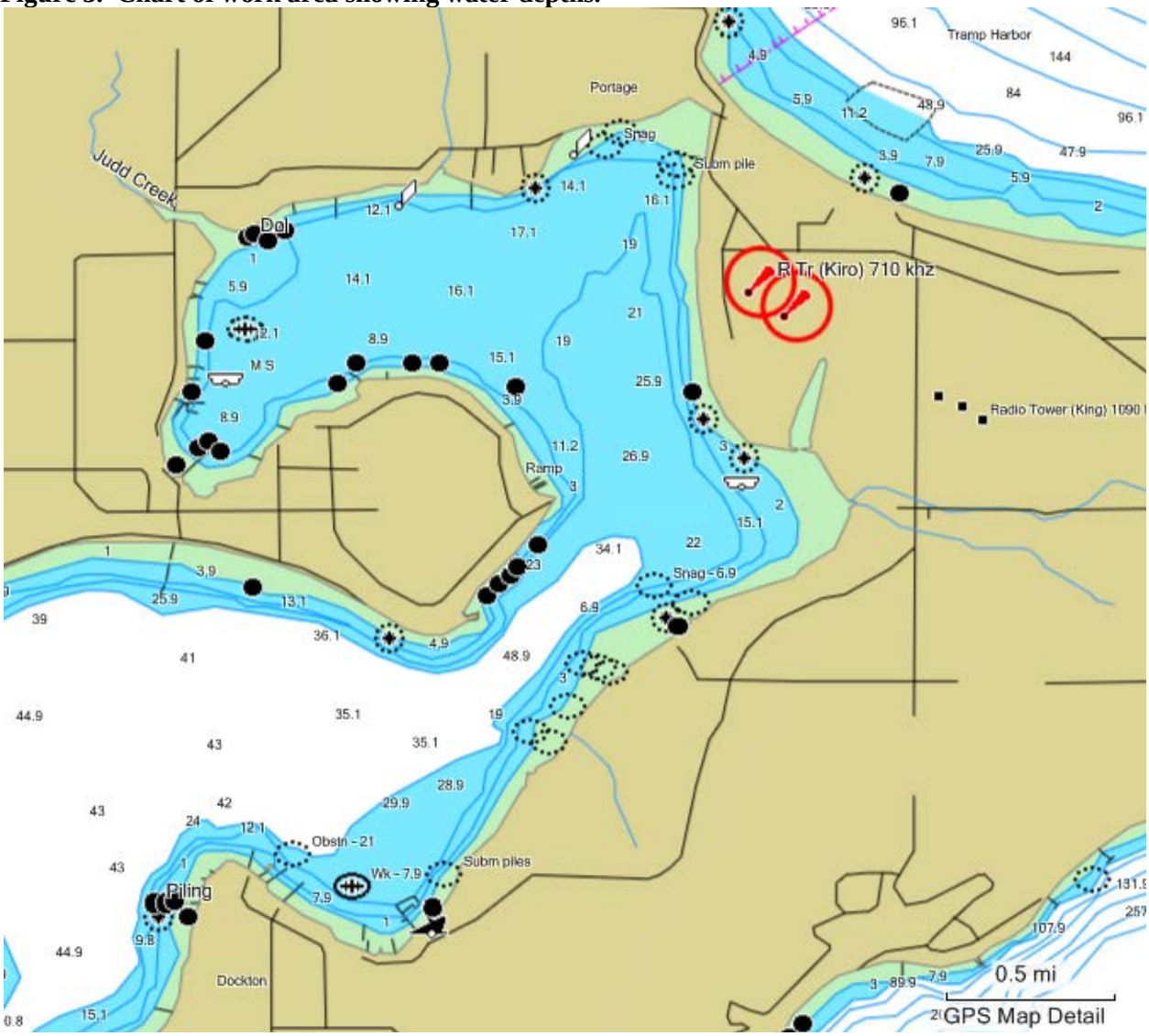


Figure 3. Chart of work area showing water depths.



INSERT TABLE OF TARGET LATS/LONGS

Alternatives to Diving: For each underwater survey or sampling operation considered by the Dive Unit, alternatives to diving are explored on a case-by-case basis. For this project in shallow protected waters, the ROV will be an adjunct to diving to enhance productivity and reduce overall diver exposure.
Diving is also required to adequately survey the general bottom conditions around the buoy anchors (substrate type, hazardous items on the bottom, eel grass and algae presence). The ROV camera has a limited field of view and divers can quickly survey a larger area of the bottom.

Value to EPA: The use of the Region 10 Dive Unit will avail scientific expertise to the dive operation in support of the Puget Sound Initiative and the Maury Island Aquatic Reserve.

Scientific Objectives: This dive operation will be conducted under the OSHA Scientific Diving Exemption, 1910 Subpart T Appendix B.

The overall purpose of this project is to perform a visual and photographic survey of buoy anchor types, any damage to WDNR benthic areas in the Aquatic Reserve, and existence of potentially hazardous materials.

Scientific Observations/Data Collection:

Dive Objectives and Protocols
Given the primary objectives of this project, the decision was made to not swim defined transects that require deploying marker buoys -- with divers swimming a compass heading.

Instead, divers will descent the mapped buoy lines to document:
-the type of line/chain used to secure the buoy;
-the type of anchor for the buoy;
- anchor or chain drag on the bottom impacting benthos;
-invasive tunicate growth;
- the area around each buoy's anchor for hazardous debris;
-bottom type;
-algal/eel grass presence.
See Table 1 for geolocational data for the targets.

Buddy teams will use open-circuit SCUBA via a live boating operation to include as many of the targets as possible. The Wooldive will be working in a separate area with the ROV.

From WDNR for the Burton area (primary area):
"The buoy field east of the two marinas contains approximately 25 buoys who's anchors we want to evaluate for potential substrate impacts and associated scouring of any eelgrass in the vicinity. Last August we looked at one anchor using a drop camera and noticed some tunicates present. To the extent your dive team is able to photograph the anchor and line systems, we will be looking for the extent of this invasive species. We intend to identify which buoys must be removed because of their composition (batteries, other hazardous materials), potential navigational hazard, ongoing substrate scouring, or containment of invasive tunicates."

From WDNR for the Dockton area (secondary area):
"We want to photograph / document the anchors associated with approximately 40 buoys on both sides of the County Marina. The buoy area southwest of King County's Dockton Park and Marina includes the two sunken vessels of concern."

At a minimum for the Dockton area, the ROV will capture video of the two sunken vessels of interest and attempt to find and hazardous materials on the wrecks.

Dive flags will be flown, and the *Monitor's* Automatic Identification System (AIS) will be activated during dive operations

Pollution Sources: This is considered a non-polluted water dive. However, there is always the chance of biological hazards from runoff and moored boats (bacterial). The divers will not contact hazardous materials (e.g., car/boat batteries, unknown containers on the bottom), just document the location for WDNR.

Dive Dress: Open circuit SCUBA and Viking suits; wet gloves are permitted.

Decontamination Required: Potable water rinse to remove seawater and potential bacteria.

Air Testing: Last Underwater Sports air test performed on 02/22/12 and verified against CGA Grade E standards.

Potential Hazards and Mitigation:

1. **Boat traffic.** Boat traffic will be the principle physical hazard during this dive operation. These risks will be managed by use of dive flags, boat positioning, and constant monitoring of VHF marine traffic channels (13, 14 & 16). The Monitor's automatic identification system (AIS) will also be used to relay the Monitor's real time position to other vessels AIS enabled.
2. **Potential entanglement.** From buoy tethers, discarded/lost buoy lines, lost fishing line. These risks will be managed by avoiding contact with lines, carrying two cutting tools on each diver, dive buddy assistance, and tethered standby diver/rescue tank for emergencies.

Maximum Expected Water Depth: 35 feet
Maximum Expected Water Current: +/- 0.5 Knots
Maximum Expected Horizontal Visibility: 12 feet

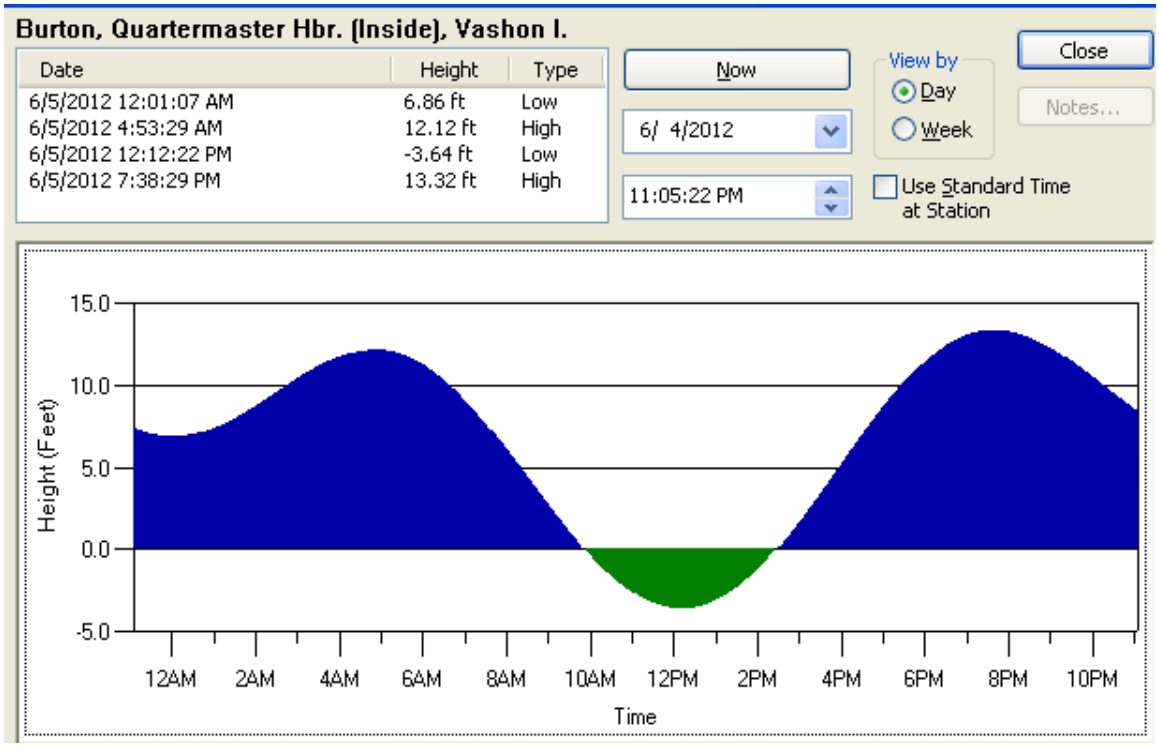
Diving Platform: EPA research vessel *Monitor***.**

Tide and Current Information:
[Note: this is the closest location for current data; we do not expect current to be an issue in the protected survey areas.]
Table 1. NOAA Tidal Current Predictions

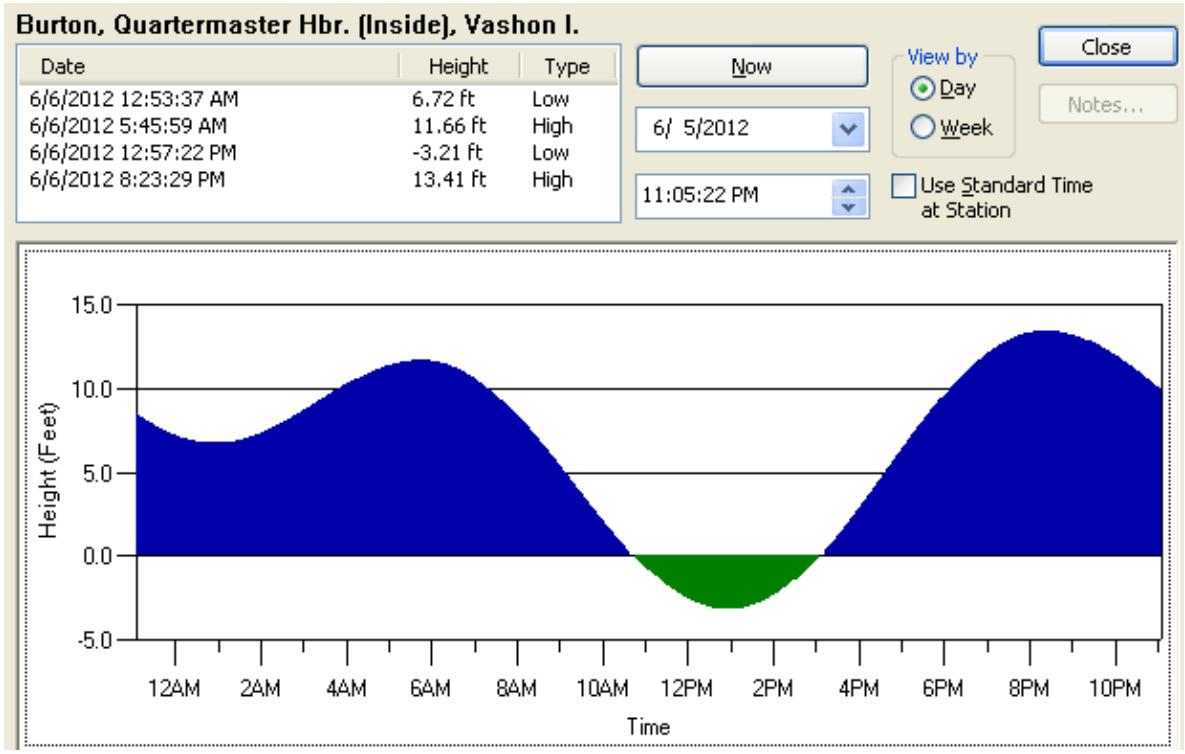
Blake Island, southwest of
Predicted Tidal Current June, 2012
Flood Direction, 131 True. Ebb (-)Direction, 326 True.
NOAA, National Ocean Service

	Slack Water	Maximum Current		Slack Water	Maximum Current		Slack Water	Maximum Current		Slack Water	Maximum Current		Slack Water	Maximum Current	
Day	Time h.m.	Time h.m.	Veloc knots	Time h.m.	Time h.m.	Veloc knots	Time h.m.	Time h.m.	Veloc knots	Time h.m.	Time h.m.	Veloc knots	Time h.m.	Time h.m.	Veloc knots
1	0047	0542	-0.7	0702	1023	+0.5	1511	1842	-0.4	1916	2155	+0.2			
2	0133	0631	-0.8	0747	1115	+0.6	1612	1942	-0.4	2020	2249	+0.2			
3	0220	0720	-0.8	0832	1205	+0.7	1706	2037	-0.4	2119	2343	+0.2			
4	0309	0809	-0.9	0919	1254	+0.7	1757	2129	-0.5	2218					
5		0036	+0.2	0359	0858	-0.8	1006	1342	+0.7	1845	2221	-0.5	2316		
6		0130	+0.2	0450	0948	-0.8	1053	1430	+0.7	1931	2312	-0.5			
7	0015	0226	+0.2	0543	1038	-0.7	1141	1517	+0.6	2015					
8		0003	-0.5	0117	0324	+0.2	0640	1131	-0.6	1231	1605	+0.6	2057		
9		0055	-0.5	0221	0427	+0.1	0744	1226	-0.5	1321	1653	+0.5	2137		
10		0148	-0.5	0324	0534	+0.1	0858	1327	-0.4	1415	1743	+0.4	2215		

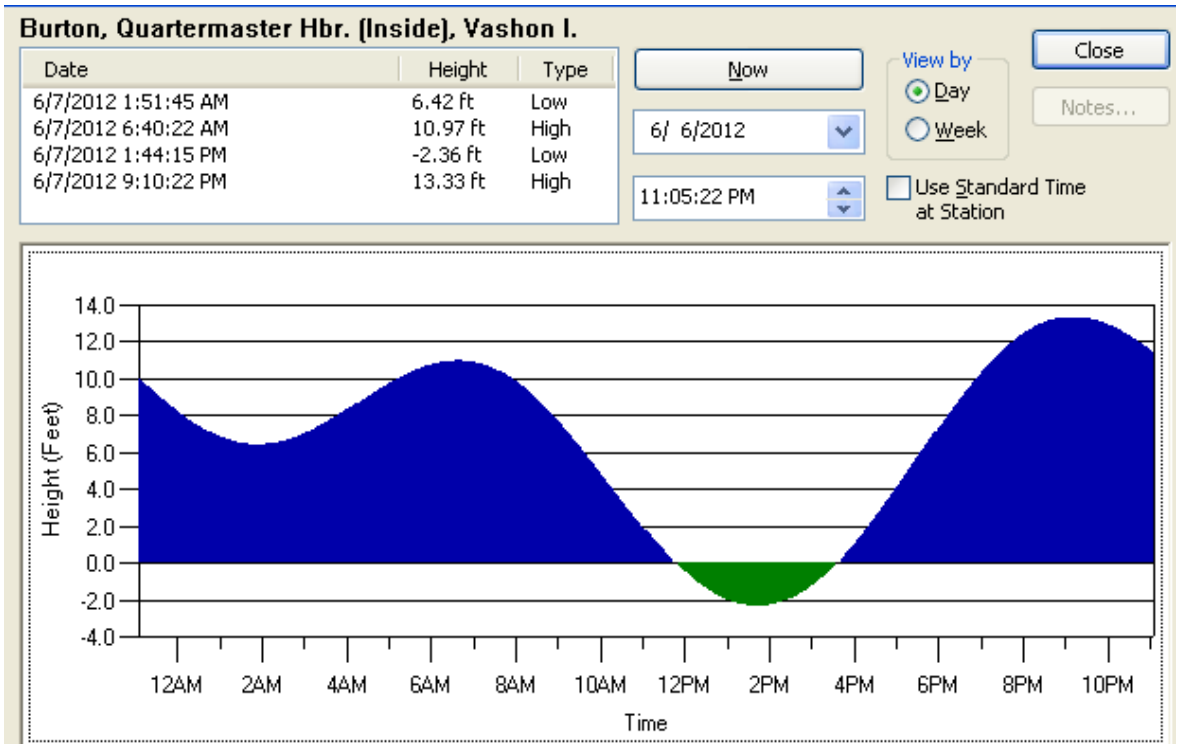
Tidal Elevation Predictions for Burton.
June 5



June 6



June 7



PERSONNEL

Divemaster: Rob Pedersen (RP)
Divers:
Tuesday 6/5 Rob Pedersen (RP), Lisa Macchio (LM), Tim Siwiec (TS), Rob Rau (RR)
Wednesday 6/6 Rob Pedersen (RP), Chad Schulze (CS), Brent Richmond (BR), Sean Sheldrake (SS)
Thursday 6/7 Rob Pedersen (RP),
Backups: 6/5 6/6 6/7 (SS)

	Diver 1	**Diver 2**	**Diver 3**	**Diver 4**	**Diver 5**
Insert applicable dates for each diver	**RR**	**SS**	**RP**	**CS**	**AB**
Last Dive *within 3 months*	4/3/2012	4/3/2012	4/4/2012	4/4/2012	2/29/2012
Medical Monitoring *within 12 months*	2/9/2012	2/16/2012	2/9/2012	3/1/2012	2/9/2012
8 hr. hazwoper *within 12 months*	12/6/2011	12/6/2011	12/6/2011	12/6/2011	12/6/2011
First Aid *within 2 years*	10/27/2010	10/27/2010	10/27/2010	10/27/2010	10/27/2010
CPR/AED *within 2 years*	12/13/2011	12/13/2011	12/13/2011	12/13/2011	12/13/2011

	Diver 1	**Diver 2**
	BR	**LM**
Last Dive *within 3 months*	4/3/2012	4/3/2012
Medical Monitoring *within 12 months*	3/1/2011	2/16/2012
8 hr. hazwoper *within 12 months*	12/6/2011	12/6/2011
First Aid *within 2 years*	10/27/2010	10/27/2010

Cox'n: Doc Thompson
Backup: Brent Richmond

CONTACT INFORMATION

Contact Information: OEA dive cell phone: 206-369-7500
Dive Operator Cell Phone:
Doc Thompson – [redacted]
Brent Richmond – [redacted]
Other Cell Phone Contacts:
Sean Sheldrake – [redacted]
Rob Rau – [redacted]
Mark Filippini – [redacted]

SCHEDULE

Dive Briefing and Load Van - **Tuesday, April 3 @ 4:00 PM**
(Immediately upon return from NOAA Dive Center)

Schedule (April 4, 2012):

Depart EPA office -	**8:00 AM**
Meet *Monitor* at Don Armeni Boat Ramp -	**8:20 AM**
Dive -	**9:30 AM – 2:30 PM**
Return to Don Armeni (unload) -	**3:00 PM**
***Monitor* return to Manchester -**	**3:30 PM**

PRE/POST DIVE TASKS

Boat Prep **(DT & BR):**

1. Fill boat freshwater tank, fill cooler for sample gear soaking
2. Bow-Stern hand lines and tag line
3. Dive flags and pole
4. Ladder
5. Drinking water on boat (divers will bring refillable bottles as primary, disposable water bottles as backup)
6. All tanks due for VIP (4)
7. Terminal 18 coordinates loaded on *Monitor* GPS (see Figure 1)

Prep. Field equip:

Prep. Dive equip (***day(s) before loading***):

1. Garmin 276 charged/point loaded (see Figure 1)/**RR**
2. Diver handheld lights /**RR**
3. Prep. Surface camera (charge all batteries, clear card)/**RR**
4. Standby dive rig prep: Kirby bailout block/AGA reg/AGAs connected (match #'s and/or replace labels)/test, leave AGAs on for transit/ 300 ft tether / **RP**
5. Verify recall is charged. /**SS**
6. Kirby bailout blocks/AGA regs/AGAs connected (match #'s and/or replace labels)/test, leave AGAs on for transit; verify 50 cf pony's are full – **CS/RR**
7. Surface supply - battery charged, components accounted for, system tested **SS/RR**
8. Prep/charge drop camera – **RP/RR**

Post dive

Fill tanks – **RR**

Equipment Required - See Attachment 1.

SAFETY AND SECURITY NOTIFICATIONS

USCG Notifications (33 USC 1221):

CG Notice Prior to start of dive operations **Needed? __X__Yes ____ No**

Done? Diver Initials: __RR__ Date___4/4/12 (call before & after dive ops)_

Advanced notification of USCG for dives near sensitive areas (e.g., port facilities, bridges) or in high traffic lanes/ areas. Call 24hr. Vessel Traffic 206-217-6051 and email sectorseattlewwm@uscg.mil

Advanced notification to USCG 206.217.6002 and email: hlswatch@pacnorwest.uscg.mil

(*For emergency operations with little notice-- you should call the number above for one week ahead* ***only*** *for*

normal operations. USE THIS NUMBER FOR LESS THAN 24 HOURS NOTICE)

CG Notice to Mariners **Needed? _X___Yes _____No Diver Initials___RR____ Date__3/22/12_____**
206-220-7280 **ALL IN CHANNEL OR NEAR CHANNEL DIVES SHALL REQUEST A NTM (SEE NAV CHART)**

CG Notice During Dive Operations **Needed? __X__Yes _____No**
Dive Operation start and end : Call 206.217.6051 and notify USCG of start and end of dive operations. Example script, "*This is the EPA Vessel Monitor, MMSID 338069238; we are commencing dive operations near XXXXXX. Please verify you can see our vessel on your AIS screen.*" **ALL IN CHANNEL OR NEAR CHANNEL DIVES SHALL NOTIFY USCG AT THE START AND END OF OPS.**

VHF shall monitor 13, 14, 16 for in or near channel dives. AIS will be on with antenna installed for all Monitor dives. For operating out of a small boat, checkout a handheld VHF from MEL (Brent Richmond) as appropriate.

Washington State Ferries **Needed? _____Yes X __No Diver Initials___Date_____**
Call Washington State Ferry Operations Center 206-515-3456 for dives in/near ferry lanes

EMERGENCY INFO./DIVE ACCIDENT MANAGEMENT PLAN

Emergency Call in Script (from NOAA 2009 DMT)

"I am an EPA [Divemaster, Dive Medic] and I am calling to report a diving related emergency requiring immediate medical assistance. The victim is a ___ (age) year old (gender) who is _____(conscious/unconscious), with the following symptoms after diving with compressed gas….(describe pain, dizziness, etc.)

"We have placed the victim in a supine position and have initiated basic first aid. We have also completed a field neurological exam. With the following results….(note any deficits). The victim is on 100% oxygen by mask, and we have rendered the following additional treatment (CPR, fluids, medications, etc.)

Last vital signs are as follows…."

Temp: _____ Pulse:_____ Resp:_____ B/P: _____/_____

“We are at the following location….. (location of diver/landmarks) and request immediate medical transport to (receiving facility of choice) via (air/ground) transport.”

Note: Do not terminate call...the receiving unit will end the call.

Source of EMERGENCY TRANSPORTATION:
U.S.C.G. for dive accidents. 911 for all accidents VIA CELL PHONE (Primary) OR VHF (backup)

Egress Point and Method of Egress:
Don Armeni Boat Ramp, 1222 Harbor Ave SW (West Seattle)

Emergency Egress: **Bell Harbor Marina, 2203 Alaskan Way, Seattle, WA 98121**

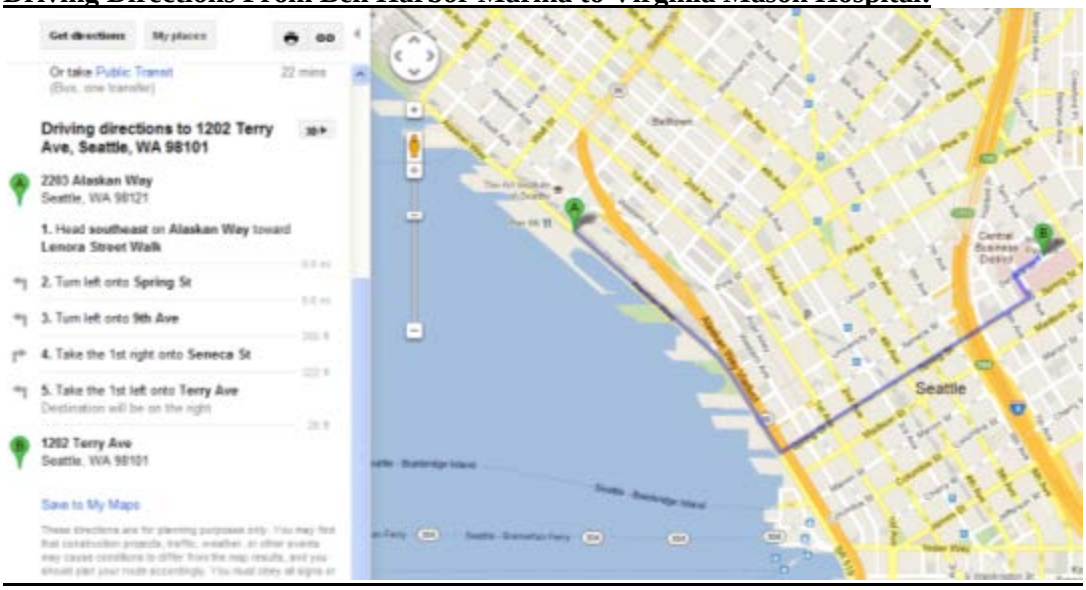
Nearest MEDICAL Facility: Virginia Mason Hospital - 206-583-6433 (Chamber phone is 206-583-6543)
Address: admission is through the Emergency Room on Spring Street at the corner of Terry and Spring streets

Nearest Hyperbaric Chamber: Virginia Mason Hospital - 206-583-6433 (Chamber phone is 206-583-6543)
Address: admission is through the Emergency Room on Spring Street at the corner of Terry and Spring streets

Primary: Virginia-Mason Medical Center 1202 Terry Ave, Seattle, WA
Hyperbarics Department: (206) 583-6543
24-hour emergency line: (206) 583-6433
(admission is through the Emergency Room on Spring Street)

Secondary: Diver's Institute of Technology
4315 11th Ave. NW, Seattle, WA
Chamber phone: (206) 783-5542

Driving Directions From Bell Harbor Marina to Virginia Mason Hospital:



Notes:

(1) Emergency helicopter transport in Puget Sound is available through the U.S. Coast Guard (Channel 16 or telephone 220-7001 *or *CG* in Seattle).

(2) Diver's Alert Network: For diving emergencies use 1-919-684-9111, for non-emergency diving questions during normal working hours use 1-919-684-2948.

FOLLOWING INCIDENT; DIVEMASTER TO NOTIFY:

1. Unit Diving Officer, Sean Sheldrake, 206.619.3046 cell
2. Regional SHEMP manager, Grady Maxwell, 206.399.9394 cell,
3. Diving Safety Board Chairman, Kennard Potts, 202.302.3529 cell,
4. Diver supervisor (see blue field emergency form).

Dive unit management sponsor, Mark Filippini, ESU, 206.409.3655 cell.

Backup Line pull signals (if using tether), Navy Diving Manual, Rev. 5, 2005

Table 8-3. Line-Pull Signals.

From Tender to Diver		Searching Signals (Without Circling Line)	
1 Pull	"Are you all right?" When diver is descending, one pull means "Stop."	7 Pulls	"Go on (or off) searching signals."
2 Pulls	"Going Down." During ascent, two pulls mean "You have come up too far; go back down until we stop you."	1 Pull	"Stop and search where you are."
3 Pulls	"Stand by to come up."	2 Pulls	"Move directly away from the tender if given slack; move toward the tender if strain is taken on the life line."
4 Pulls	"Come up."	3 Pulls	"Face your umbilical, take a strain, move right."
2-1 Pulls	"I understand" or "Talk to me."	4 Pulls	"Face your umbilical, take a strain, move left."
3-2 Pulls	"Ventilate."		
4-3 Pulls	"Circulate."		
From Diver to Tender		**Searching Signals (With Circling Line)**	
1 Pull	"I am all right." When descending, one pull means "Stop" or "I am on the bottom."	7 Pulls	"Go on (or off) searching signals."
2 Pulls	"Lower" or "Give me slack."	1 Pull	"Stop and search where you are."
3 Pulls	"Take up my slack."	2 Pulls	"Move away from the weight."
4 Pulls	"Haul me up."	3 Pulls	"Face the weight and go right."
2-1 Pulls	"I understand" or "Talk to me."	4 Pulls	"Face the weight and go left."
3-2 Pulls	"More air."		
4-3 Pulls	"Less air."		
Special Signals From the Diver		**Emergency Signals From the Diver**	
1-2-3 Pulls	"Send me a square mark."	2-2-2 Pulls	"I am fouled and need the assistance of another diver."
5 Pulls	"Send me a line."	3-3-3 Pulls	"I am fouled but can clear myself."
2-1-2 Pulls	"Send me a slate."	4-4-4 Pulls	"Haul me up immediately."
ALL EMERGENCY SIGNALS SHALL BE ANSWERED AS GIVEN EXCEPT 4-4-4			

NOTE: A high pitch squealing sound on the surface unit indicates the ema2 plug has been unplugged from the AGA mask. Instruct the diver to reconnect these via the DIVER RECALL.

Medical Treatment for a <u>CONSCIOUS</u> Diver (Source: NOAA DMT Course 2007)

- **ABC's**
- **Administer 100% Oxygen**
- **Cut exposure suit open/remove if wet to keep patient dry/warm**
- **Place in position of comfort**
- **Give one (1) aspirin (325 mg) orally***
- **Take vitals every 5 min if unstable; 15 min if stable***
  -Pulse/per min
  -Blood Pressure
  -Respirations/per min
- **Gather dive history info. from buddy***
- **Perform neurological exam ***
- **Contact EMS**
- **Administer 0.5 liters of water orally per hour x 2 hours then reduce to 100-200 ml per hr thereafter**

Note deficiencies on blue card.

Medical Treatment for an <u>UNCONSCIOUS</u> Diver

- **ABC's / Contact EMS**
- **Administer 100% Oxygen**
- **Cut exposure suit open/remove if wet to keep patient dry/warm**
- **Lateral recumbent position (on side)**
- **Take vital signs every 5 min if unstable and every 15 min if stable***
  -Pulse/per min
  -Blood Pressure
  -Respirations/per min
- **Gather dive history info. from dive buddy and/or eye witnesses***
- **Perform neurological exam***

Note deficiencies on blue card.

TO BE FILLED OUT FOR PATIENT ASSESSMENT

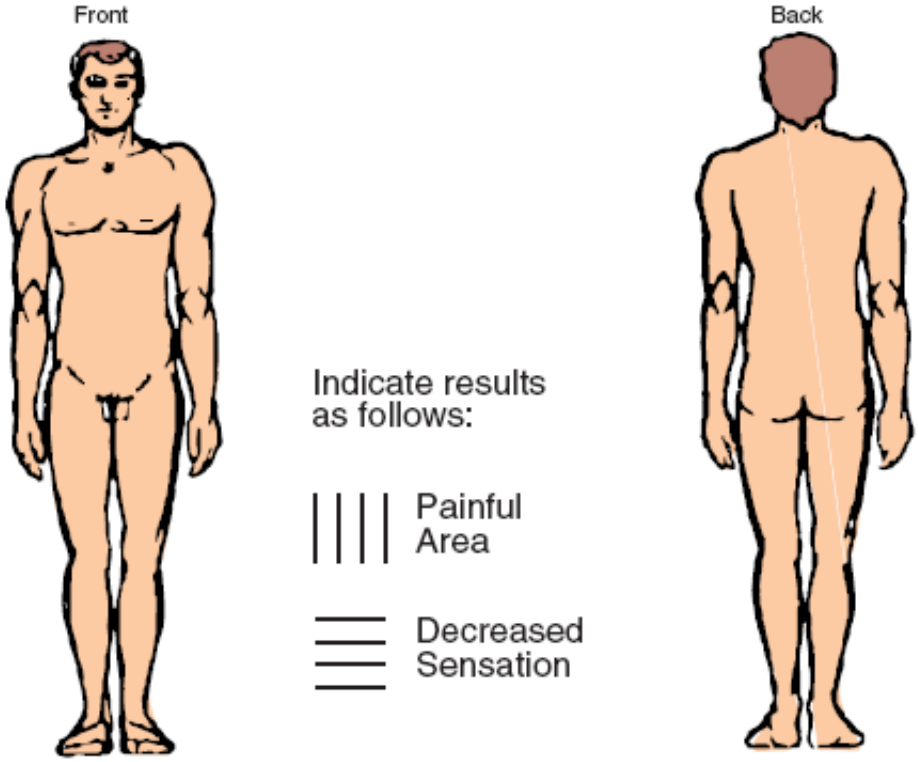
Neurological Examination* (Source: NOAA DMT Course 2009) Page 1 of 2

Note deficiencies on blue card. One person administers, one person checks off items on the list.

MENTAL STATUS/LOC	**STRENGTH**
-Alert to person, place, time	**Upper Body**
-Add a nickel, dime, quarter	-Deltoids
-Count back from 100 by 7's	-Latissimus
	-Biceps
	-Triceps
VITAL SIGNS	-Forearms
-Pulse/min	-Hands
-Blood Pressure	**Lower Body**
-Respiration/min	-Hips
-Temperature	Flexion
	Extension
COORDINATION	Abduction
-Walk	Adduction
-Heel-to-Toe	-Knees
-Romberg	Flexion
-Finger-to-Nose	Extension
-Heel-Shin Slide	-Ankles
-Rapid Movement	Flexion
	Extension
CRANIAL NERVES	
-Vision/Visual Fields	**REFLEXES**
-Eye movements/pupils (PERRLA)	-Biceps
-Facial sensation/chewing	-Triceps
-Facial expression muscles	-Knees
-Hearing	-Ankles
-Upper mouth/throat sensation (ah)	-Toes (Babinski)
-Gag and voice	
-Shoulder shrug	
-Tongue	
SKIN SENSATION	
Exam performed by:	
Date:	
Time:	

Neurological Exam. page 2/2

Location



Comments:

History:

Chief complaint:

S - (Signs and symptoms of current episode)

O - Onset (when problem began and what caused it)

P - Provocation or palliation (what makes it feel better or worse)

Q - Quality (what is the pain like, i.e. crushing, dull, sharp, other)

R - Region/radiation (where is the pain, does it move anywhere)

S - Severity (rated on a scale of 1 to 10)

T - Timing of pain (constant, intermittent, duration)

A - Allergies (Rx, foods, insect stings, other substances and what reaction occurred)

M - Medications (Rx, Otc, herbs, vitamins)

P - Pertinent past history (recent illnesses, injuries, surgeries)

L - Last oral intake (including food, liquids, alcohol, drugs)

E - Events leading to the injury or illness

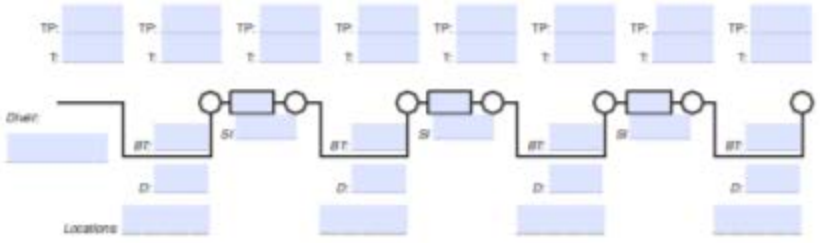
Dive Profile:

Comments:

Time **Oxygen** Administration **Started**	Time **Oxygen** Administration **Ended**

Further Description of the Accident:

NOTES: TP = Tank Pressure, T = Clock Time, BT = Bottom Time, D = Maximum Depth, and SI = Surface Interval



Dive History:

Date/time of occurance:	Location:
Breathing gas:	Equipment Used:
Unusual events prior to dive:	

If repetitive dives, list all in last 24 hours (list most recent first):

Date	Number of dive	Depth	Bottom time	Surface interval	Breathing gas

Review of Systems: (Circle and describe, add other symptoms if present, include negatives)

a. General- Recent weight change, fever/chills, fatigue, feeling of ill health:
b. HEENT - Headaches, visual/hearing changes, ringing in ears, bleeding, sore throat, hoarseness:
c. Cardiac - Chest pain, palpitations, shortness of breath, orthopnea, edema, history of stroke, hypertension, claudication (angina of the extremities), phlebitis:
d. Pulmonary - Cough, sputum, hemoptysis:
e. Gastrointestinal- Difficulty eating, abdominal pain, nausea/vomiting, ulcers, vomiting blood, jaundice, diarrhea, liver disease:
f. Genitourinary - Dysuria, nocturia, frequency, hematuria, urgency, discharge, incontinence:
g. GYN - Discharge, menstrual history, pregnant?
h. Endocrine - Polyuria, appetite, excess thirst, heat or cold intolerance:
i. Musculoskeletal- Joint pain, stiffness, swelling, weakness:
j. Neurological- Dizziness, loss of consciousness, syncope, numbness, seizure, paresthesias:
k. Skin - itching, rashes, lumps, bruising:
Comments or additional information:

Vital:	Time:	Time	Time	Comments:
LOR				
HR				
RR				
BP				
Skin-CMT				

Name (print) | Signature | Title